

Claims: I claim:

1.

An ultrasonic longitudinal-torsion tissue dissection system comprising an electrical generator supplying electrical voltage and current by connection to

a electro-mechanical transducer that is joined mechanically to a

Longitudinal-Torsional resonator mechanically that is mechanically joined to

a tip in contact with biological tissue.

2.

A system of claim 1 where the electro-mechanical transducer is a longitudinal transducer.

3.

A system of claim 1 where the electro-mechanical transducer is a torsional transducer.

4.

An ultrasonic longitudinal-torsion tissue dissection system comprising an

electrical generator supplying electrical voltage and current by connection to

a electro-mechanical transducer that is joined mechanically to a

longitudinal-torsional resonator mechanically that is mechanically joined to

a tip in contact with biological tissue.

a source of irrigation fluid connected to

said Longitudinal-Torsional resonator.

5.

A system of claim 1 where the electro-mechanical transducer is a longitudinal transducer.

6.

A system of claim 1 where the electro-mechanical transducer is a torsional transducer.

7.

A system of claim 4 where said source of irrigation fluid is connected to said electro-mechanical transducer.

8.

An ultrasonic longitudinal-torsion tissue dissection system comprising an

electrical generator supplying electrical voltage and current by connection to

a electro-mechanical transducer that is joined mechanically to a

longitudinal-torsional resonator mechanically that is mechanically joined to

a tip in contact with biological tissue.

a vacuum source connected to

said Longitudinal-Torsional resonator.

9.

A system of claim 1 where the electro-mechanical transducer is a longitudinal transducer.

10.

A system of claim 1 where the electro-mechanical transducer is a torsional transducer.

11.

A system of claim 8 where said source of irrigation fluid is connected to said electro-mechanical transducer.